Fast Growing Trees: Should I, or Shouldn't I?

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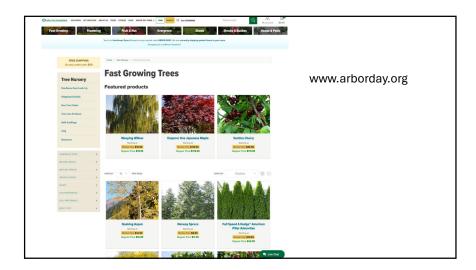


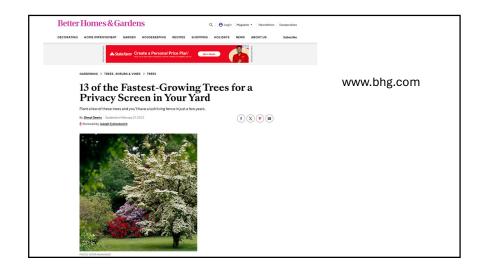
NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

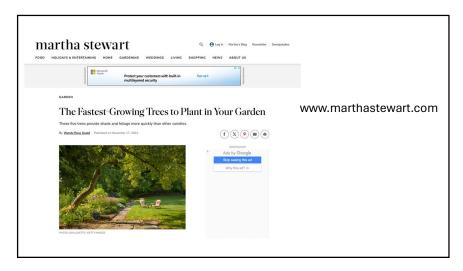
What is the most common question I am asked?

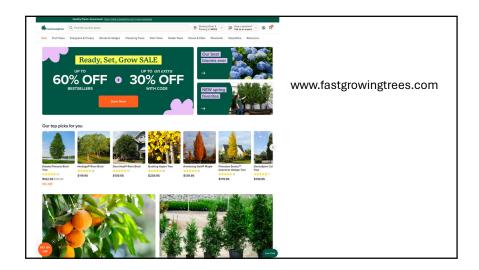
- What is the best tree that I should plant?
- This is a loaded question.
- The answer is always...depends.
- Follow-up question must follow.
- Most often...person wants something that has great fall color, minimal maintenance and....

Grow fast!!!











Fast Growing

- Live fast, die young is a truism often applied to rock stars but could just as easily describe trees
- Many trees take decades to reach full size, and in this fast-paced world, not everyone has the patience to wait that long.
 - Fortunately for the eager gardener, there are species that mature relatively quickly.
- Fast growing is often defined as a tree that matures in 20 to 30 years.
- Fast growth, however, may sacrifice other qualities.
 - · Fast Growth = Weak Wood and Short Lived

Benefits of Fast-Growing Trees

- The first reason to choose a fast-growing tree is so that it will fill the spot you have planned for it quickly.
 - This is an important consideration, especially if you have the tree fulfilling multiple functions in addition to being a landscape feature.
- Other reasons to include a fast-growing tree, though, include the following:
 - · It may offer brightly colored flowers or foliage.
 - It may help you soak up a damp spot in the yard (if you choose a water-loving variety).
 - It may offer shade and privacy faster.
- These types of trees can offer plenty of benefits. That's why willows, poplars, birch trees, and similar fast-growing varieties are used so often in landscaping.

Benefits of Slow-Growing Trees

- At the other end of the spectrum, a very slow-growing tree can play a different role in your landscaping.
- Some reasons why you might entertain the thought of a slower-growing tree include the following:
- The tree will need trimming for a specific size or shape (such as for a hedge), and you don't want to have to prune it every month.
- You want the tree to last for a much longer time (fast-growing trees may be shorter-lived or suffer diseases and pests).
- A slower-growing tree can often offer low-maintenance beauty, and some even come with relatively noninvasive roots when compared to more aggressive trees such as willows.

Places to Avoid Planting Either Type of Tree

- Keep in mind that some issues can't be solved by simply choosing a different type of tree. Some spots in your landscaping where you shouldn't place either type of tree include:
 - On or near your septic system, sewer line, or other pipes
 - Within 8 to 20 feet of your house (depending on tree size)
 - Too close to a driveway or patio
- Even a less aggressive tree will eventually establish itself in the area and could end up putting roots in any nearby pipes.





Issues with Fast Growing Trees

- Fast-Growing Trees Are Notorious for Weak, Brittle Wood
 - Fast-growing trees fill in space well, but such speed of growth translates into a
 tree with weak, brittle wood. Trees with softer wood in addition to a tendency to
 grow forks and crotches with narrow angles ultimately fare poorly under certain
 conditions.
 - Strong winds, added weight of snow and ice, and the passage of time all make branches more likely to snap. Additionally, smaller twigs commonly break off and litter your landscape with debris.
- Fast-Growing Trees Don't Last Long
 - Finally, trees that experience rapid growth do not stick around for the long haul. Multiple fallen branches and disease like fungal canker damage a tree enough to kill it. Pests like the elm leaf beetle and ash borer can also shorten a tree's life.
 - Some tree species just aren't very prolific. Expect the popular Bradford pear tree
 to quit before 20 years have passed, and a willow to last less than 50 years.
 When other tree ages reach into the hundreds of years, 20 to 50 years is not very
 long.

Fast-Growing Trees Are Often More Susceptible to Disease

- An unfortunate characteristic of trees that grow rapidly is their tendency to develop disease. Fungal canker disease is a common ailment of many trees.
- You may notice scattered areas of wilted leaves on the tree caused by canker, followed by dead, discolored, or sunken bark on the trunk or branches.
- Willows and poplars are especially susceptible to canker that appears as lesions on the bark, black warts, or leaking orange sap. Sometimes canker appears as long thin lesions on tree bark. Often canker grows within a tree and causes wood rot.



Fast-Growing Trees Often Develop Shallow Roots

- Tree roots anchor a tree firmly to the ground and draw nutrients and water from the soil and up into the tree.
 - However, many fast-growing tree species develop very shallow roots.
 - Shallow roots are a problem when they grow beneath sidewalks and driveways and crack the concrete.
 - Roots that grow too near the surface of your lawn make it hard for grass to grow.
- Additionally, a shallow root system is more likely to intercept underground sewer pipes and other important utility lines. The problems associated with broken pipes far outweigh the benefits of quick shade from a fast-growing tree.





Culture and Care

- To ensure optimal growth, provide good soil, proper nutrients, and ample water. Because they put on so much growth each year and can have weaker wood, it is important that quick growing trees and shrubs receive proper trimming
- It is important, when placing the quick growing plant material, that enough room is left between them and any structures or plants.
 - Fast growing trees and shrubs can rapidly shade out other plant material if planted too closely.
 - Also, plant beds and structures can be damaged if the quick growing trees and shrubs need to be removed or come down on their own.

Differences in Care and Maintenance

- As you may have surmised, a slower-growing tree may demand different care than a faster-growing tree. A faster-growing tree, such as a cottonwood, may have less dense wood that's relatively weak because it grew more speedily.
- Often, trees with this softer, weaker wood need pruning back to iust the strongest branches for structural stability. You also need to be especially careful not to overfertilize these fast-growing trees, or you could encourage them to grow even faster at the expense of wood strength.

Ways to Influence Your Slow-Growing Tree to Grow Faster

- Even a moderate or slow-growing tree can grow more quickly in an ideal situation or more slowly in a less ideal situation. If you want the benefits of a slow grower but would like to help it along, talk to your tree care experts about how to provide the best environment for growth.
- · Fertilizing your tree moderately (not excessively), providing it the correct amount of water, and putting it in a spot with plenty of sun may help. Keeping grass, weeds, and other plants from growing under the tree may also help by allowing the tree to make the most of the nutrients and moisture in the soil.
- These comparisons may help you get a better sense of the differences in care. behavior, and drawbacks between a fast grower like a willow and a slow grower like an oak. Be sure to talk to your tree experts, AAA Tree Service, about which tree varieties do best in your area and which types may flourish in the spot you have in

Trees to Avoid

Autumn Blaze® Freeman Maple (Acer xfreemanii 'Jefersred')

- A hybrid of Red and Silver Maple, this vigorous grower combines the best attributes of both in a, fast growing shade tree.
- Often described as "drought tolerance and exceptionally bright red fall color are hallmarks of this popular and proven performer."
- Not pH tolerant and marginal hard.
- It or miss tree in our area, generally more miss than hit.



Mountain Ash (Sorbus americana)

- Zone: 3 to 7
- A lovely tree that will grow to around 30 feet, with a spread of perhaps 15 feet, the mountain ash is a good food source for a variety of wildlife.
- That's all good, but the list of potential problems includes borers, aphids, sawflies, scale, mites, fire blight, rust, and scab. Cankers, crown gall, and powdery mildew may also attack.
- Do you want a tree with this many potential problems in your landscape?
- Plant Korean Mountain Ash instead
 - · Less disease issues



Niobe or Golden Weeping Willow Salix alba 'Tristis'

- Zone: 3 to 8
- Grows up to 50 feet and just as wide
- · Great near streams or ponds
- Do not plant this near a house or driveway because of its susceptibility to breakage and invasive roots which seek out cracks in sewers and water pipes.



Eastern White Pine *Pinus strobus*

- Zone 3
- Will grow to 50' tall by 20-30' wide.
- Prefers moist well-drained soil and can grow 1 to 1.5' per year.
- Can have issues with wind, chlorosis (not pH tolerant) and is not salt or pollution tolerant.



Trees to Consider

Amur Maple *Acer tataricum* subsp. *ginnala* and cvs.

- · Zones: 3 to 7
- Size after 10 years: 15 to 20 feet tall from a 6-foottall sapling
- · Mature size: Up to 20 feet tall and wide
- · 3-season stunner
 - Showy clusters of small yellowish flowers in spring; a lovely, leafy, rich green canopy in summer; and outstanding red fall color.
- If you're searching for a versatile, multistemmed tree that will look great in almost any setting—as a specimen planting, a screen, or an accent grouping in full sun or partial shade—you need look no further.
- While a number of pests and other problems can affect amur maple, none is a serious issue worth worrying about.
- · Some states consider this tree to be invasive.



Arborvitae Thuja occidentalis

- Some varieties are hardy from Zones 3
- One of the most versatile evergreens in the landscape, arborvitae (Thuja occidentalis) can be sheared into a hedge or allowed to form a handsome, pyramidal tree.
- Once established, arborvitae are exceptionally cold hardy and drought tolerant.
- When they're young, the trees will grow at a rate of eight to 12 inches per year.
- · Not deer resistant
- · Some cultivars will winter burn
- North Pole® ('Art Boe')



Birch (Betula spp.)

- Several varieties of birch are lovely landscape plants; a few sport dramatic exfoliating bark.
- In addition, many thrive in wet environments; avoid planting in a hot, dry location, and aim for afternoon shade.
- Generally reaching 40 to 50 feet, occasionally available as a clumping tree with 3-5 stems,
- Many birch varieties are susceptible, though, to the bronze birch borer, a tree killer, and they have a very shallow root system that can be easily damaged by soil disturbance.
- Birch leaf miner is another significant problem, and control requires spraying, which is time-consuming and costly.
- Not a tree to be avoided at all costs but think carefully before planting.

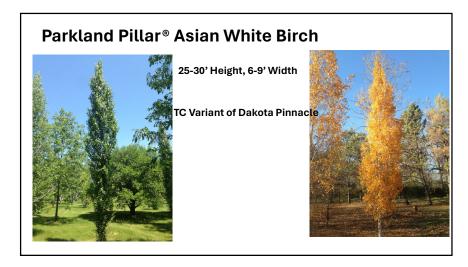


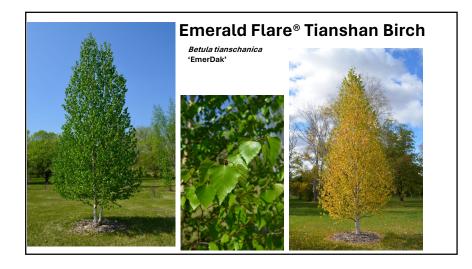
River Birch Betula nigra

- Zones (3)4
- As its name suggests, the river birch naturally grows along riverbanks.
 - As a landscape tree, it can be planted almost anywhere.
- The species is valued for its relatively rapid growth, tolerance of wetness and some drought, unique curling bark, and spreading limbs
- · Eextremely high resistance to birch borer.
- This tree also puts on a nice fall show, adding a splash of brilliant yellow fall color.
- Northern Tribute® NDSU Release









Elms

- Zone 3
- Fast-growing and long-lived, often reaching a lifespan of 100 years or more. (This isn't always the case for fast-growing trees.)
- Make sure you use Dutch Elm Disease resistant cultivars.
- Can be heavy seeders



Prairie Expedition® American Elm (*Ulmus americana* 'Lewis & Clark')

- Zone 3
 - Hardiest of all the American cultivars
- U.S. native
- 60 x 40'
- DED resistant







Discovery® Japanese Elm

- Upright vase shaped in form, dense crown branching
- Good dark green foliage through the growing season. Yellow fall color
- Moderate growth rate
- prune to form in younger years.
- 40 x 30 35'



Photo by Rick Durand, Manito





Elms to Avoid

Cathedral Elm (*U. pumila* x *japonica*)

- Very hardy and adaptable, umbrella to vase shaped form
- Rapid grower requiring attention to structural pruning when young
- 40-50 x 40-50'
- Only moderate resistance to DED

Photo by Greg Morgenson, NDSU WPIP

Siberian Elm *Ulmus pumila*

- DED resistant
- Smaller Leaves (¾ 3" long) as Compared to American Elm (3 – 6" long)
- Highly Invasive
- Can easily detect if present in a hybrid because of the rounded buds







Night Rider Hybrid Elm (*Ulmus* x'ByRick')

- Hybrid of Siberia (*U. pumila*) and Japanese (*U. davidiana* var. *japonica*) elm.
- 40 x 30'
- · Rounded form
- Resistant to DED and wooly aphid
- · Purple fall color
- · Heavy seed set



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Elm Disclaimer

- All elms can get Dutch Elm Disease
- All elms need yearly pruning after planting for the first 10 – 15 years to produce proper branch structure
- Utilize (save) elm for tough sites which may help control their highly vigorous growth and save ideal planting spots for other genera.
- Ideally to match tree with specific site and not to just fill a hole to meet the diversity guideline of 20-10-5





Photo by Greg Morgenson, NDSU WPI

Hackberry Celtis occidentalis

- Zones 3
- The hackberry, while often forgotten by casual consumers, is commonly heralded by tree experts as "one tough tree."
- Native and produces non-messy fruit.
- Drought and flood tolerant, vary from 14 to 60" of annual rainfall.
- They can even stand up to strong winds and tolerate air pollution.
- All of this hardiness adds up to a good landscape choice, particularly if you're looking for an energy-conserving shade tree that doesn't require watering.
- Fall color is poor and often used as a boulevard tree



Littleleaf Linden Tilia cordata and cvs.

- Size after 10 years: 18 to 22 feet tall from a 6-foot-tall
- · Mature size: Up to 40 feet tall and 30 feet wide
- · Tough and Adaptable
- Amazingly adaptable and can even be heavily pruned as a hedge or screen.
- · If you love pollinators, this is the tree for you. When its fragrant, creamy yellow flowers are in bloom in huge quantities in June, it's an absolute bee magnet.
- · Because of its tolerance for urban conditions, littleleaf linden is often seen in street plantings.
- It is appealing to a number of insects and may be bothered by powdery mildew, leaf spots, and canker, but none of these issues is usually serious.
- · It's content in many soils and will grow well in full sun



Northern Catalpa (Catalpa speciosa)

- Zones 4
- This is a tree that demands your attention.
- White, showy flowers. Giant heart-shaped leaves. Dangling bean-like seed pods. Twisting trunk and branches.
 - How could you not stop to take it in?
- While not ideal for every location, this unique and hardy tree is a fast grower that finds a home in parks and yards throughout the country.
- · Drought and flood tolerant
- Heartland®



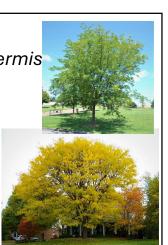




Thornless Honeylocust Gleditsia triacanthos var. inermis

- Zones 3
- Fast-growing and long-lived, often reaching a lifespan of 70 years or more. (This isn't always the case for fast-growing trees.)
- · Brilliant yellow fall color with smaller leaflets

 - Allowing them to more easily disappear into underlying lawn or softscape which means raking is not required,"
 Cast a dappled shade, which is favorable for underplanting
- Can grow as much as 3 to 4 feet per year when young, which helps them reach 40 to 50 feet tall within 10 years.
 - · This tree isn't ideal for small yards.
- · Considered a low-maintenance tree.
- · It's tolerant of a wide range of soil conditions and is not bothered by drought, summer heat, occasional flooding, saline conditions, or urban pollution
- · May produce some fruit which can be messy.



Succession Planting

- Plant more durable, slower growing trees at the same time, so the fastgrowing trees can be cut out as the permanent trees reach a functional size.
- Plant slower growing trees that are stronger, last longer, and resist disease.
 When you cannot wait a few years for shade or privacy, add a few fast-growing trees to the mix temporarily. When your investment proves up and those strong trees are a bit taller, remove the unwanted temporary trees.
- When using quick growing plant material in the landscape, it is a good idea to diversify with both fast growing and traditional plant material. This way you get the best of both worlds. You get a quick screen or shade and allow time for the slower plant material to grow. After a decade, or so, re-evaluate the quick growing plant material and remove what is necessary. This technique leaves the more desirable and more reliable slower growing plant material which has had time to mature.

Conclusion

- · Realize that faster is not always better
- Generally, faster growth = weak wood and short lived
- Utilize succession planting
- · Ultimately, enjoy what you plant and not worry about it.